

F. Baier, Max-Planck-Institute Stuttgart, Stuttgart, Germany
"Positron Annihilation"

Publications:
None, new collaboration.

J. M. Dubois, CNRS, Nancy, France
"Mechanical, Chemical and Electrical Properties"

Publications:
D. J. Sordel and J. M. Dubois "Quasicrystals: perspectives and potential applications" *MRS Bull.*, 1997, 22, 34-39.
J. M. Dubois, C. Comte, M. Zandona, J. M. Dubois and D. Sordel "Influence of crystal structure and purity of nominally identical Al-Cu-Pd-Mn quasicrystals on their behavior" in *Quasicryst., Proc. Int. Conf.*, Ed. by S. F. Takeuchi, Takeo, World Scientific, Singapore, 1998, 777-781.
J. M. Dubois, P. Plaindoux, E. Belin Ferre, N. Tamura and D. J. Sordel "Surface energy of icosahedral quasicrystals" in *Quasicrys., Proc. Int. Conf.*, Ed. by S. F. Takeuchi, Takeo, World Scientific, Singapore, 1998, 733-740.
P. A. Thiel and J. M. Dubois "Quasicrystals: Reaching Maturity for Technological Applications" *Materials Today*, 1999, 2, 3-7.
P. J. Pinasco, D. J. Sordel, P. Brunet, J. M. Dubois and P. A. Thiel "Room temperature oxidation of Al-Cu-Fe and Al-Cu-Pd-Mn quasicrystals" *Mater. Res. Soc. Symp. Proc.*, 1999, 553, 263-269.
E. Belin Ferre, J. M. Dubois, V. Fourrier, P. Brunet, D. J. Sordel and L. M. Zhang "About the Al 3p density of states in Al-Cu-Fe compounds and its relation to the compound stability and apparent surface energy of quasicrystals" *Mater. Sci. Eng. A*, 2000, A294-296, 818-821.
P. Brunet, J. M. Dubois, D. J. Sordel, M. Besser and J. M. Dubois "Comparative study of microstructural and tribological properties of annealed bulk icosahedral samples" *Mater. Sci. Eng. A*, 2000, A294-296, 74-78.
J. M. Dubois, Y. Anderegg, Ghanta, F. Munschautz, D. J. Sordel, M. Besser, P. A. Thiel and J. M. Dubois "Surface oxidation of Al-Cu-Fe alloys characterized by x-ray photoelectron spectroscopy" *Appl. Surf. Sci.*, 2001, 173, 327-338.

Ronan McGrath, University of Liverpool, Liverpool, England
"Scanning Tunneling Microscopy Studies"

Publications:
T. J. Lang, A. W. Muniz, T. M. Parker, R. McGrath, R. D. Diehl, D. W. Delaney and T. A. Lograsso "Clustered, terraced and mixed surface phases of the Al_{1-x}Pd_xMn quasicrystal" *Surf. Sci.*, 1999, 433-435, 666-671.
J. Ledieu, C. A. Muryn, G. Thornton, G. Cappello, J. Chevrier, R. D. Diehl, T. A. Lograsso, D. Delaney and R. McGrath "Decomposition of the five-fold surface of Al_{1-x}Pd_xMn at elevated temperatures" *Mater. Sci. Eng. A*, 2000, A294-296, 79-83.
J. Ledieu, C. A. Muryn, G. Thornton, R. D. Diehl, T. A. Lograsso, D. W. Delaney and R. McGrath "C₆₀ adsorption on the quasicrystalline surface of Al_{1-x}Pd_xMn" *Surf. Sci.*, 2001, 472, 89-96.
E. J. Cox, J. Ledieu, R. McGrath, R. D. Diehl, C. J. Jenks and J. Fisher "The 10-fold surface of the decagonal Al_{1-x}Ni_xCo₃ quasicrystal studied by LEED, SPA-LEED, AES, and STM" in *MRS Proceedings on Quasicrystals*, in press.

W. Steurer, ETH Zurich, Zurich, Switzerland
"Quasicrystal Net Planes"

Publications:
None, new collaboration.

R. Diehl, Pennsylvania State University, University Park, PA USA
"Adsorption and Scanning Tunneling Microscopy of Clean Surfaces"

Publications:
J. Ledieu, A. M. Tunc, P. Parker, R. McGrath, R. D. Diehl, D. W. Delaney and T. A. Lograsso "Structural study of the five-fold surface of the Al_{1-x}Pd_xMn_y quasicrystal" *Surf. Sci.*, 1999, 433-435, 666-671.
J. Ledieu, A. W. Muniz, T. M. Parker, R. McGrath, R. D. Diehl, D. W. Delaney and T. A. Lograsso "Clustered, terraced and mixed surface phases of the Al_{1-x}Pd_xMn quasicrystal" in *Quasicryst. Symposium Held November 30 December 2, 1998*, Boston, Massachusetts, U.S.A., Ed. by J.-M. Dubois, P. A. Thiel and J. M. Dubois, Y. Anderegg, Ghanta, F. Munschautz, D. J. Sordel, M. Besser, P. A. Thiel and J. M. Dubois "Surface oxidation of Al-Cu-Fe alloys characterized by x-ray photoelectron spectroscopy" in *MRS Proceedings on Quasicrystals*, in press.

E. J. Cox, J. Ledieu, R. McGrath, R. D. Diehl, C. J. Jenks and J. Fisher "The 10-fold Surface of the Decagonal Al_{1-x}Ni_xCo₃ quasicrystal studied by LEED, SPA-LEED, AES, and STM" in *MRS Proceedings on Quasicrystals*, in press.

B. I. Wehrer, J. W. Andreregg, C. J. Jenks, A. R. Ross, T. A. Lograsso, R. D. Diehl and P. A. Thiel "TDS study of potassium adsorption on Al(111) and fivefold Al-Pd-Mn" in *MRS Proceedings on Quasicrystals*, in press.

A. Gellman, Carnegie Mellon University, Pittsburgh, PA USA
"Friction Studies of Clean Surfaces"

Publications:
J. Ledieu, A. J. Gellman, T. A. Lograsso, C. J. Jenks and P. A. Thiel "Friction between single-grain Al_{1-x}Pd_xMn_y(0001) quasicrystal surfaces" *Surf. Sci.*, 1999, 423, 245-252.
C. Mancinelli, C. J. Jenks, P. A. Thiel, T. A. Lograsso and A. J. Gellman "Comparative study of the tribological and oxidative properties of Al/Pt/Mn quasicrystals and their cubic approximants" in *MRS Proceedings*, in press.

T. Jach, National Institute of Standards and Technology, Gaithersburg, MD USA
"X-Ray Standing Wave Studies"

Publications:
T. Jach, S. M. Thurgate, Y. Zhang, R. Coletta, A. I. Goldman, S. Kyoko, M. de Boissieu and M. Boudard "Dynamical diffraction and X-ray standing waves from reflections in the quasicrystal Al/Pd/Mn" in *Quasicryst., Proc. Int. Conf.*, Ed. by S. F. Takeuchi, Takeo, World Scientific, Singapore, 1998, 43-46.
T. Jach, Y. Zhang, R. Coletta, A. I. Goldman, T. A. Lograsso, D. W. Delaney and S. Kyoko "Dynamical Diffraction and X-Ray Standing Waves from Atomic Planes Normal to a Twofold Symmetry Axis of the Quasicrystal Al/Pd/Mn" *Phys. Rev. Lett.*, 1999, 82, 2904-2907.
G. Cappello, A. Dechelette, F. Schmitthenen, S. Decossas, J. Chevrier, F. Comme, V. Formoso, M. de Boissieu, T. Jach, R. Coletta, T. A. Lograsso, C. Jenks and D. Delaney "Bulk and surface evidence for the long-range spatial modulation of X-ray absorption in the Al-Pd-Mn quasicrystal at Bragg incidence" *Mater. Sci. Eng. A*, 2000, A294-296, 863-866.

S. Riley, Argonne National Laboratory, Argonne, IL USA
"Cluster Formation"

Publications:
J. A. Barrow, E. F. Rexer, D. J. Sordel, M. Besser, C. J. Jenks, S. J. Riley and P. A. Thiel "Analysis of gas phase clusters made from laser-vaporized icosahedral Al-Pd-Mn" in *MRS Proceedings on Quasicrystals*, in press.

J. Shield, University of Utah, Salt Lake City, UT USA
"Mechanical Properties"

Publications:
J. E. Shield, J. A. Campbell and D. J. Sordel "Mechanical properties of Al-Cu-Fe-based quasicrystalline coatings" *J. Mater. Sci. Lett.*, 1997, 16, 2019-2021.
J. E. Shield and M. J. Kramer "Deformation characteristics of quasicrystalline Al-Cu-Fe alloys" *J. Mater. Res.*, 1997, 12, 2043-2047.
J. E. Shield and M. J. Kramer "Deformation-induced planar defects in Al-Cu-Fe quasicrystals" *J. Mater. Res.*, 1997, 12, 300-303.

Z. Yu, Brookhaven National Laboratory, Brookhaven, NY USA
"Local Atomic Structure"

Publications:
None, recent collaboration.

E. Belin Ferre, Université Pierre et Marie Curie, Paris, France
"Surface Energy and Electronic Structure"

Publications:
J. M. Dubois, P. Plaindoux, E. Belin Ferre, N. Tamura and D. J. Sordel "Surface energy of icosahedral quasicrystals" in *Quasicrys., Proc. Int. Conf.*, Ed. by S. F. Takeuchi, Takeo, World Scientific, Singapore, 1998, 733-740.
E. Belin Ferre, J. M. Dubois, V. Fourrier, P. Brunet, D. J. Sordel and L. M. Zhang "About the Al 3p density of states in Al-Cu-Fe compounds and its relation to the compound stability and apparent surface energy of quasicrystals" *Mater. Sci. Eng. A*, 2000, A294-296, 818-821.

T. Janssen, University of Nijmegen, Nijmegen, The Netherlands
"Surface Studies via Second Harmonic Generation and Atomic Force Microscopy"

Publications:
None, new collaboration.

U. Köster, University of Dortmund, Dortmund, Germany
"Oxidation"

Publications:
B. I. Wehrer, U. Köster, A. Rudiger, C. Pieper and D. J. Sordel "Oxidation of Al-Cu-Fe and Al-Pd-Mn quasicrystals" *Mater. Sci. Eng. A*, 2000, A294-296, 830-833.

R. Nicula, University of Rostock, Rostock, Germany
"Inelastic X-Ray Scattering"

Publications:
None, new collaboration.

D. Shechtman, Technion University, Haifa, Israel
"Quasicrystal Coatings"

Publications:
C. I. Lang, D. J. Sordel, M. F. Besser, D. Shechtman, F. S. Biancaniello and E. J. Gonzalez "Quasicrystalline coatings: thermal evolution of structure and properties" *J. Mater. Res.*, 2000, 15, 1894-1904.

D. Naumovic, University of Fribourg, Fribourg, Switzerland
"X-Ray Photoelectron Diffraction"

Publications:
D. Naumovic, P. Arslan, L. Schlapbach, C. Beillat, T. A. Lograsso and D. W. Delaney "Study of the 5-fold and 2-fold Al/Pd/Mn surfaces by full-hemispherical X-ray photoelectron diffraction" in *Quasicrys., Proc. Int. Conf.*, Ed. by S. F. Takeuchi, Takeo, World Scientific, Singapore, 1998, 749-756.
D. Naumovic, P. Arslan, L. Schlapbach, C. Beillat, T. A. Lograsso and D. W. Delaney "Characterization of surface morphologies of the long-range spatial modulation of X-ray absorption in the Al-Pd-Mn quasicrystal at Bragg incidence" *Mater. Sci. Eng. A*, 2000, A294-296, 863-866.
D. Naumovic, P. Arslan, L. Schlapbach, C. Beillat, T. A. Lograsso, C. Jenks and D. Delaney "Characterization of surface morphologies of the long-range spatial modulation of X-ray absorption in the Al-Pd-Mn fivefold surface" *Mater. Sci. Eng. A*, 2000, A294-296, 871-872.

R. Teghil, Università della Basilicata, Potenza, Italy
"Pulsed Laser Ablation"

Publications:
R. Teghil, L. D'Alessio, M. A. Simone, M. Zaccagnino, D. Ferro and D. J. Sordel "Pulsed laser ablation of Al-Cu-Fe quasicrystals" *Appl. Surf. Sci.*, 2000, 168, 267-269.

H. Nakajima, Osaka University, Osaka, Japan
"Mass Transport"

Publications:
W. Springer, T. A. Lograsso and H. Nakajima "Diffusion of ⁵⁹Mn and ⁶⁴Ge in single grain icosahedral Al_{1-x}Pd_xMn_y quasicrystals" *Surf. Sci. Diffus. Defects Data Pt. A*, 1997, 143-147, 849-854.
W. Springer, T. A. Lograsso and H. Nakajima "Self and impurity diffusion in icosahedral Al-Pd-Mn quasicrystals" *Mater. Res. Soc. Symp. Proc.*, 1998, 430, 309-316.
W. Springer, T. Nakajima and T. A. Lograsso "Diffusion in icosahedral Al-Pd-Mn quasicrystals" in *Quasicrys., Proc. Int. Conf.*, Ed. by S. F. Takeuchi, Takeo, World Scientific, Singapore, 1998, 429-432.
T. Zumkay, H. Nakajima and T. A. Lograsso "Solid diffusion of Ni in icosahedral Al-Pd-Mn quasicrystals" *Philos. Mag. A*, 2000, 80, 105-1074.

A.-P. Tsai, National Research Institute for Metals, Tsukuba, Japan
"Sample Growth and Thermal Properties"

Publications:
A. Inaba, H. Takakura, A. P. Tsai, I. R. Fisher and P. C. Canfield "Heat capacities of icosahedral and hexagonal phases of Zn-Mg-Y system" *Mater. Sci. Eng. A*, 2000, A294-296, 723-726.

P. Munro, University of New South Wales, Sydney, Australia
"Quasicrystal Composites"

Publications:
W. Springer, T. A. Lograsso and H. Nakajima "Diffusion of ⁵⁹Mn and ⁶⁴Ge in single grain icosahedral Al_{1-x}Pd_xMn_y quasicrystals" *Surf. Sci. Diffus. Defects Data Pt. A*, 1997, 143-147, 849-854.
W. Springer, T. A. Lograsso and H. Nakajima "Self and impurity diffusion in icosahedral Al-Pd-Mn quasicrystals" *Mater. Res. Soc. Symp. Proc.*, 1998, 430, 309-316.
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T. Zumkay, H. Nakajima and T. A. Lograsso "Solid diffusion of Ni in icosahedral Al-Pd-Mn quasicrystals" *Philos. Mag. A*, 2000, 80, 105-1074.

J. O'Comor, University of Newcastle, Newcastle, Australia
"Crystalline/Quasicrystalline Interference"

Publications:
None, new collaboration.

C. Campbell, J. A. Campbell and D. J. Sordel "Microstructural analysis of a Fe/Al/quasicrystal-based composite prepared using a focused ion beam mill" *J. Microsc.*, 2001, 201, 201-211.

Collaboration Philosophy

To facilitate excellent quasicrystal research throughout the world by

- Providing our expertise on quasicrystals
- Making available high quality samples produced at Ames Laboratory
- Learning from other world-class facilities